

**COMPARATIVE ANALYSIS OF FUNCTIONAL OUTCOME IN THORACOLUMBAR  
FRACTURES AND DISLOCATIONS FIXED WITH SHORT SEGMENT WITH INDEX VERTEBRA  
FIXATION AND LONG SEGMENT SPANNING FIXATION**

**ABSTRACT**

**INTRODUCTION**

Dorsolumbar burst fractures are unstable mostly which requires surgical spinal stabilization to maintain anatomical reduction and stability and also to promote early bony fusion and mobilization. Posterior short segment pedicle screw fixation is usually done for burst fractures. Eventhough early clinical results of this surgery are usually satisfactory, a high failure rate and progressive kyphosis remain a concern. To overcome this in addition to short segment fixation, pedicle screw is inserted at the fracture site. Long segment fixation is usually reserved for fracture dislocation. In order to compare the results of functional outcome of both this study is undertaken.

**MATERIALS AND METHODS**

Twentyfive patients were treated surgically between August 2015 to September 2017 and followed for a period of 12 months. Of these four patients were lost followup and hence twenty one cases were included in the study and followed for a period of 1 year.

**RESULTS**

In our study, almost 88% of the cases (22 patients) were males and only 3 patients (12%) were females. MODIFIED MACNAB CRITERIA in long segment, 72.7% of the patients were good (8 cases) and in short segment 70% of the cases were good (7 cases). In long segment, 27.7% of the patients were fair (3 cases) and in short segment 30% of the cases were fair (3 cases). In our study, the mean of Oswestry disability index in long segment is 32.31 and mean in short segment is 31.99. P VALUE is 0.956 which is not significant.

In our study, among the 25 patients, one patient had rod breakage but the patient had no pain and no neurological deficit and functional outcome is good. Patient resumed his activities. One patient had superficial wound infection which was treated with antibiotics and dressing. Among the patients with neurological deficit, no patient had bed sore. Remaining 23 patients had no complications.

## CONCLUSION

In long segment spanning fixation, even though the amount of blood loss is more, operating time is prolonged and complications rate were high there is no significant difference in functional outcome between short segment pedicle screw with index vertebra fixation when compared to long segment spanning fixation. However considering the operating time, blood loss and neurological recovery, short segment with index vertebra fixation is a better alternative to long segment spanning fixation in treating thoracolumbar fractures and dislocations.

Keywords: short segment fixation, long segment fixation, dorsolumbar spine fractures, Oswestry disability index